

changes are made to that interval until processing has been completed. Paper No. 14 expresses the Examiner's disagreement with Applicant's position on whether those of ordinary skill in the art would have understood from the disclosure that the fine value interval is changed in subsequent iterations of process steps S4-S7 of Figure 1 (Applicant's position, of course, is that his disclosure teaches that the interval is not changed). Applicant's contended interpretation of the phrase "further finely divided laser intensities" is the proper one in the context of the disclosure. For this reason, Applicant respectfully requests the Examiner's reconsideration in view of the following.

Applicant attributes the present difficulties in the prosecution to two primary contributing factors. The first factor is the wording in the specification. Applicant does not contend that the wording could not be somewhat more clear in describing that the fine value interval remains the same during plural iterations of steps S4-S7. However, if and where necessary, the specification wording can be changed to improve the description, provided of course that any such changes do not introduce new matter.

The second factor stems from what Applicant understands as well known to those of ordinary skill in this art, but may not be so well known to those whose endeavors are not strictly within the art. According to Applicant, those of ordinary skill in this art recognize that there is a propensity for the surface potential of a photoreceptor to drift after exposure. This is not a property of only a defective photoreceptor surface, but also of a normal photoreceptor. According to Applicant, it is well known by those of ordinary skill in this art that the surface potential of a normal photoreceptor will drift considerably. As such, Applicant did not discuss this drift phenomenon of the

photoreceptor surface potential in the present specification. Rather, he focused on the disadvantages of conventional residual potential correction techniques (See page 4, lines 21-24, for example). Now in retrospect, Applicant believes that omission of a discussion of the surface potential drift phenomenon, while not a problem for those of ordinary skill in the art because they have known of the phenomenon, has complicated the full understanding of his invention for the Examiner. If the Examiner requires, Applicant is willing to declare that those of ordinary skill in the art have known of the surface potential drift phenomenon, by way of an affidavit under 37 CFR §1.132 or the like.

Generally, the photoreceptor surface potential varies or drifts in dependence upon the position where the potential is detected. Further, it varies depending upon environmental factors such as temperature and humidity conditions in proximity to the photoreceptor. Moreover, during repetition of steps S4 through S7, at issue here, there will be no assurance that exactly the same portion of the photoreceptor surface will be exposed by the laser exposure mechanism at each repetition. Naturally, this also contributes to variance in the measured potentials, to some extent, during each iteration of steps S4 through S7.

From Paper No. 14, it seems that the Examiner also has concerns that actually are related to the problem of photoreceptor surface potential drift, but perhaps not recognized by the Examiner as related to such. In the stated reasons for the rejection of claims 1-5 under the first paragraph of 35 U.S.C. §112, Paper No. 14 expresses concern that the loop process of Applicant's steps S4 through S7 could continue indefinitely. Indeed, steps S4 through S7 of Applicant's iteration process could lead to a nearly

infinite loop, indefinitely missing the target intensity value, if implemented according to the interpretation of the phrase "further finely divided laser intensities" asserted by Paper No. 14. This is because Applicant's invention then would have nearly the same problem as with Arevalo's process, where successively smaller intensity intervals (successively halved according to Arevalo) could miss a drifting surface potential value and thereafter continue indefinitely, always growing smaller, but without capturing the target value. Applicant's process, by contrast, using the same interval in repeating steps S4-S7, locates the optimal laser intensity value with a very high probability.

Fortunately, however, because the phenomenon of photoreceptor surface potential drift has been well known to persons of ordinary skill in this art, those persons would not have interpreted Applicant's disclosure in a manner such that Applicant's process would have problems similar to Arevalo. With the background knowledge of this drift phenomenon, those of ordinary skill in the art would understand Applicant's disclosure to define "further finely divided laser intensities" as used on pages 6 and 7, page 12 and other sections of Applicant's disclosure to refer only to a one-time reduction of the laser intensity interval used for the recited coarse or "first" potential detecting step (of both independent claims 1 and 2). With the surface potential drift phenomenon in mind, those of ordinary skill in the art readily would appreciate that Applicant's disclosure does not call for any reduction of the fine laser intensity interval after the fine interval intensities have been calculated on the first pass-through of step S7 in the processing of steps S4 through S7. Such persons would readily understand that interval recalculation occurs once after exposure in step S4 with the coarse interval

intensities generated in step S3. Persons of ordinary skill in this art would appreciate that to increasingly narrow the fine intensity interval for subsequent iterations of steps S4 through S7 would complicate processing without improving the likelihood of achieving the target potential. Such persons would appreciate that due to surface potential drift, subsequent interval narrowing would likely amount to little more than "groping the dark" in locating the target potential.

The foregoing conclusion regarding what those of ordinary skill in the art would have understood from Applicant's original disclosure follows directly from Applicant's specification. There is no further modification of the fine intensity value interval once the interval has been set. As the Examiner notes from the paragraph bridging pages 10 and 11 of the specification, Applicant's first potential detecting step is carried out with the coarse laser intensities  $P_{MAX} \times (920/1023)$ ,  $P_{MAX} \times (940/1023)$ ,  $P_{MAX} \times (960/1023)$ ,  $P_{MAX} \times (980/1023)$ , and  $P_{MAX} \times (1000/1023)$  according to an interval of  $P_{MAX} \times (10/1023)$ . This occurs in step S3 of Figure 1. Then, in step S7, the fine intensity values of page 12, namely  $P_{MAX} \times (950/1023)$ ,  $P_{MAX} \times (952/1023)$ ,  $P_{MAX} \times (954/1023)$ ,  $P_{MAX} \times (956/1023)$  and  $P_{MAX} \times (958/1023)$  according to an interval of  $P_{MAX} \times (2/1023)$  are calculated. Consistent with Applicant's position, the specification gives no further examples of a different interval of fine intensity values because no different interval is used until the final maximum intensity has been obtained.

In retrospect, Figure 1 could be improved in showing Applicant's processing approach. Once the Examiner agrees that Applicant's original disclosure supports

Applicant's position as stated herein, modification of Figure 1 is suggested. There are alternatives for modifying Figure 1 to better illustrate Applicant's process. Once the Examiner expresses agreement with Applicant's position, the undersigned will contact the Examiner to discuss these alternatives. It likewise will not be a complicated matter to amend the specification, without adding new matter, to correspond with any such modified drawing.

In view of the foregoing comments, Applicant courteously urges the Examiner to reconsider Applicant's position and to come into agreement with Applicant on the issues discussed herein. Applicant respectfully submits that the rejections based upon each of the first and the second paragraphs of 35 U.S.C. §112 are overcome by the arguments set forth herein. As such, these rejections should be withdrawn. Furthermore, because the now pending claims patentably distinguish over the cited art, pending claims 1-5 are deemed allowable. Favorable action with respect to this application in accordance with the above courteously is solicited.

Respectfully submitted,

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